

Supporting Information.

Below are fits of exponential functions to the transient absorption data shown in Figures 7, 8 and 9. Data were fit to functions of the form $\Delta\text{absorption} = C_0 + \sum C_i \exp(-k_i t)$. Rate constants in Table 4 are averages determined from experiments on multiple crystals.

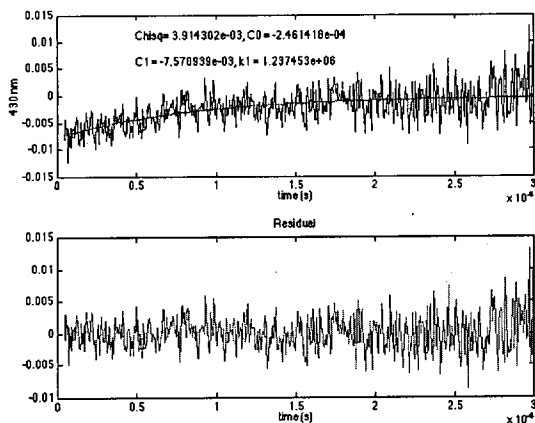


Figure 7A

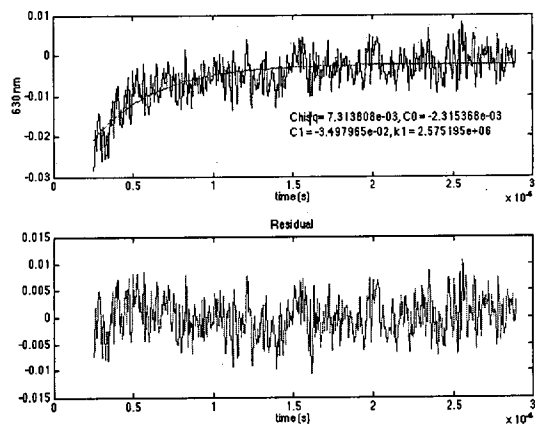


Figure 7B

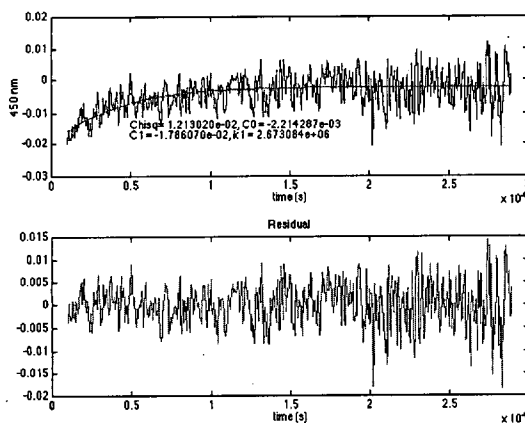


Figure 7C

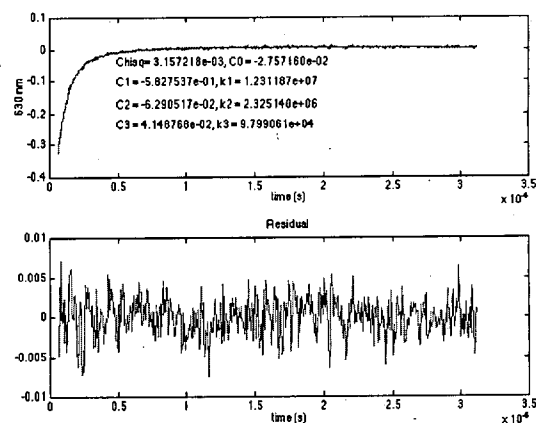


Figure 7D

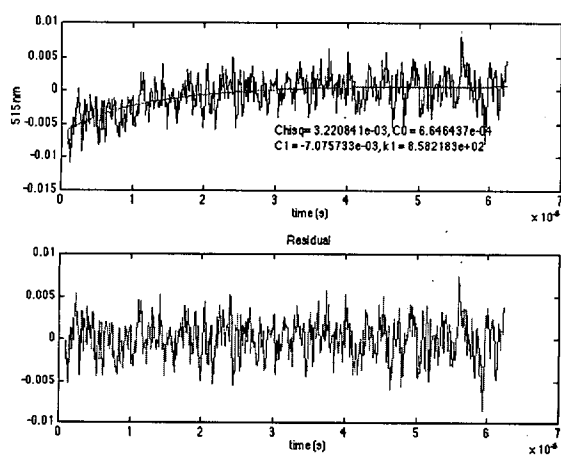


Figure 8A

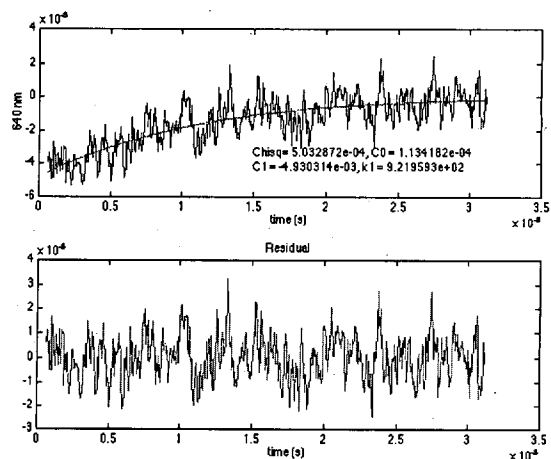


Figure 8B

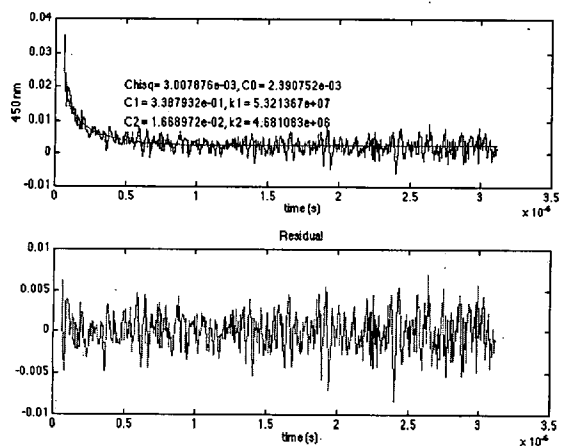


Figure 9A

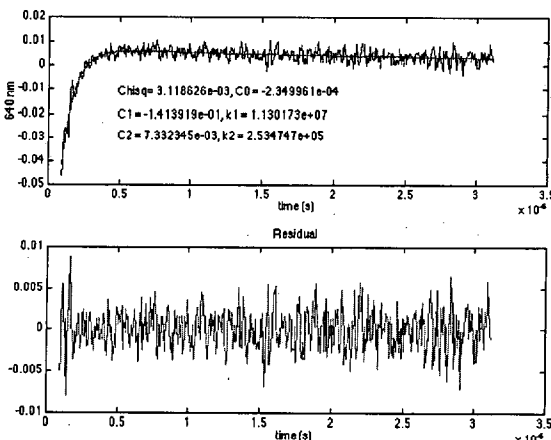


Figure 9B